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(71) Applicants (for all designated States except US): **WEST-  
ERNGECO SEISMIC HOLDINGS LIMITED**; Citco  
Building, P.O. Box 662, Road Town, Tortola (VG).  
**WESTERNGECO CANADA LIMITED** [CA/CA]; 237  
- 4th Avenue S.W., 30th Floor, Fifth Avenue Place, Cal-  
gary, Alberta T2P 4X7 (CA). **SERVICES PETROLIERS  
SCHLUMBERGER** [FR/FR]; 42, rue Saint-Dominique,  
F-75007 Paris (FR).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **VAN MANEN,**

**Dirk-Jan** [NL/NO]; St. Edmundsvei 49b, N-0280 Oslo  
(NO). **CURTIS, Andrew** [GB/GB]; 7 Seton Place, Ed-  
inburgh EH9 2JT (GB). **ROBERTSSON, Johan, Olof,**  
**Anders** [SE/NO]; Sørkedalsveien 61, N-0376 Oslo (NO).

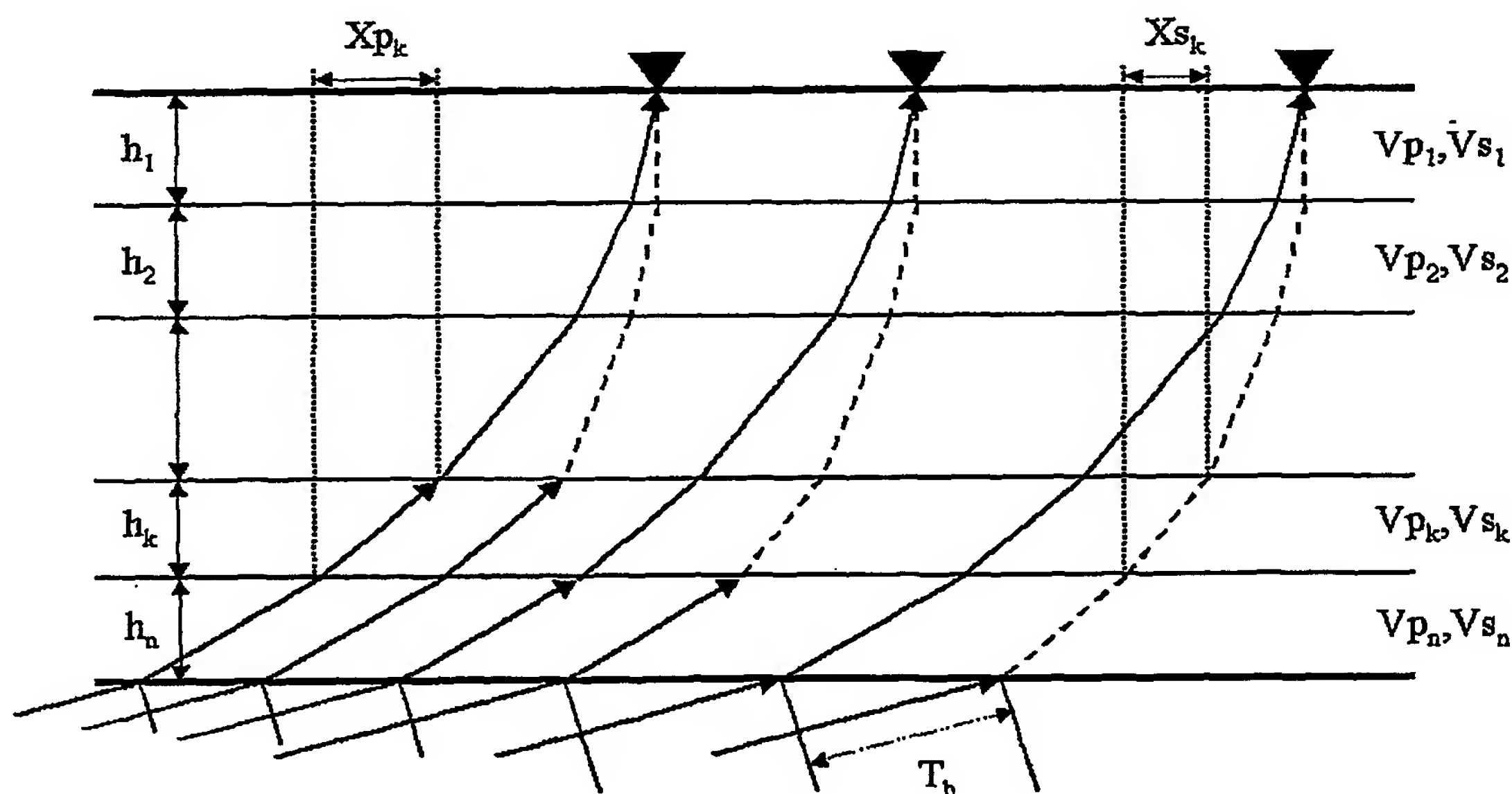
(74) Agent: **MIRZA, Akram, Karim**; Intellectual Property  
Law Department, Schlumberger Cambridge Research Lim-  
ited, High Cross, Maddingley Road, Cambridge CB3 0EL  
(GB).

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(54) Title: **MULTI-COMPONENT SEISMIC DATA PROCESSING**



(57) Abstract: There is described a method of moveout or velocity analysis of seismic signals using the steps of obtaining such signals from a plurality of receivers, identifying receiver functions within the acoustic signals, analyzing said receiver functions for velocity or moveout characteristics, using the result of said analyzing step to determine, properties of multiple layers of earth located below said 10 receivers. The analyses can involve the use of representation of the traveltime differences as approximated power series of slowness or horizontal distances. The method is the first to comprehensively deal with a multi-layered earth or velocity model.

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